

CLAIMS:

We claim:

1 1. A method for synthesizing [7-
2 (dipropylamino)phenothiazin-3-ylidene]dipropylamine comprising the steps
3 of:

4 (a) reacting phenothiazine with dipropyl amine in the
5 presence of bromine;

6 (b) purifying the product of step (a).

1 2. A method of the synthesis of [7-(dipropylamino)pheno-
2 thiazin-3-ylidene]dipropylamine comprising the step of reacting 3,7-
3 dibromophenothiazine-5-ium bromide with dipropyl amine optionally in the
4 presence of Copper.

1 3. A method for the synthesis of [7-(dipropylamino)pheno-
2 thiazin-3-ylidene]dipropylamine comprising the steps of:

3 (a) acetylating the ring nitrogen of 3,7-dinitrophenothiazine;

4 (b) reducing the product of step (a);

5 (c) alkylating the product of step (b) with: (c') propyl bromide
6 and a base or (c'') propyl aldehyde plus NaBH₃CN.

1 4. A method for isolating 7-(dipropylamino)pheno-thiazin-
2 3-ylidene]dipropylamine from an impure mixture comprising the steps of:

3 (a) dissolving the impure mixture in hot water;

4 (b) filtering the hot solution of step (a) to remove insoluble
5 matters;

6 (c) treating the hot filtrate of step (b) with ZnCl₂ to precipitate
7 the ZnCl₂ salt;

8 (d) dissolving the ZnCl₂ salt in a base;

9 (e) washing the filtrate of step (d) with an organic solvent
10 treating the same with a salt to precipitate 7-(dipropylamino)pheno-thiazin-3-
11 ylidene]-dipropylamine.

1 5. A method for preparing 7-(dipropylamino)pheno-
2 thiazin-3-ylidene]dipropylamine comprising the step of reacting (4-
3 aminophenyl)dipropylamine with [2-amino-5-(dipropylamino)phenyl]-
4 thiosulfonic acid.

1 6. A method for preparing 7-(dipropylamino)pheno-
2 thiazin-3-ylidene]dipropylamine comprising the step of reacting reacting (4-
3 {[4-(dipropylamino)phenyl]amino}phenyl)-dipropylamine with S, I₂, DCB.
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6 7. A method of the synthesis of [7-(dipropylamino)pheno-
7 thiazin-3-ylidene]dipropylamine comprising the step of reacting
8 phenothiazine or any salt thereof with dipropyl amine optionally in the
9 presence of Copper.